

What is claimed is:

1. A method of controlling a vehicle comprising:

determining a relative roll angle;

determining when the vehicle is in a transitional maneuver; and

when the vehicle is in a transitional maneuver, setting a roll signal for control to the relative roll angle.

2. A method as recited in claim 1 further comprising when the vehicle is in a transitional maneuver and the two inside wheels are grounded, setting a roll signal for control to the relative roll angle.

3. A method as recited in claim 1 further comprising when the vehicle is not in a transitional maneuver and the relative roll angle is less than a threshold, setting a reference bank to the maximum of a previously determined reference bank or the relative roll angle plus the wheel departure angle.

4. A method as recited in claim 1 further comprising operating a safety system in response to the roll signal for control.

5. A method as recited in claim 1 further comprising a vehicle rollover in response to the roll signal for control.

6. A method as recited in claim 1 wherein the transitional maneuver is a right to left maneuver.

7. A method as recited in claim 1 wherein the transitional maneuver is a left to right maneuver.

8. A method of controlling a vehicle comprising:

determining a relative roll angle;

determining a wheel lift status; and

when the relative roll angle is above a non-transition threshold and the wheel lift status is grounded, adjusting the reference bank angle to the maximum of either the reference bank angle or the relative roll angle plus the wheel departure angle.

9. A method as recited in claim 8 further comprising generating a roll signal for control in response to the reference bank angle.

10. A method as recited in claim 9 further comprising operating a safety system in response to the roll signal for control.

11. A method as recited in claim 9 further comprising a vehicle rollover in response to the roll signal for control.

12. A method as recited in claim 8 wherein the wheel lift status is a grounded status at one of two inside wheels.

13. A method of operating a vehicle comprising:

- determining roll condition;
- holding a peak brake pressure to counteract rollover;
- determining a first wheel departure angle;
- determining a second wheel departure angle after the first wheel departure angle; and
- when the change of the first wheel departure angle and the second wheel departure angle is less than a threshold, releasing the peak brake pressure.

14. A method as recited in claim 13 further comprising determining a roll rate, when the vehicle is below a predetermined roll rate, releasing the peak pressure.

15. A method as recited in claim 13 further comprising counteracting a rollover in response to the brake pressure.

16. A method of operating a vehicle comprising:

- determining a drive torque;
- determining a wheel departure angle; and
- when the drive torque is below a first threshold and the wheel departure angle is less than a second threshold, initiating active wheel lift detection.

17. A method as recited in claim 16 wherein initiating comprises requesting an engine torque reduction.

18. A method as recited in claim 16 wherein initiating comprises requesting a brake pressure command to a wheel.